

FLORIASTER MAYA, NEW GENUS AND SPECIES
OF THE FAMILY GONIASTERIDAE
(ECHINODERMATA: ASTEROIDEA)

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Abstract.—*Floriaster maya*, a new genus and species of goniasterid starfish from the Yucatan Channel, is described. It is mainly distinguished by the large, rough, cauliflower-like granules, and the single, irregular row of abactinal plates on the arms.

Among the many echinoderms collected by the Texas A&M University research vessel *Alaminos*, a single specimen of a goniasterid starfish was taken near the southern entrance to the Yucatan Channel in deep water. The specimen is in very good condition, and is so strikingly different that there is little doubt that it represents a new genus.

The Goniasteridae are a very large and widely distributed family, mainly from tropical and subtropical waters at moderate depths, but also with representatives in temperate, boreal, and austral waters, and in shallow and deep waters. They are abundantly represented in the Western Atlantic by about 34 species in 23 genera. Although Halpern (1970, 1970a) revised the Western Atlantic Goniasteridae, with particular attention to the Caribbean and Gulf of Mexico, new genera and species will undoubtedly be added as some of the less accessible and therefore less known areas of the region are explored (viz., the Yucatan Channel, Cayman and Puerto Rico Trenches, and the central Colombian and Venezuelan Basins).

Floriaster, new genus

Type-species.—*Floriaster maya*, n. sp.

Diagnosis.—Abactinal plates slightly tumid, irregular, closeset, not at all tabulate, surrounded by irregular row of rough, indented granules; some abactinals bare in center, many with 1-3 enlarged, rounded granules and/or small or large pedicellariae; superomarginal plates decidedly tumid, separated medially on arms by single row of abactinals; actinal plates large, few, mostly covered with large, irregular, indented granules, or 1-2 huge, cauliflower-like granules and/or tall, clapper-like pedicellariae; adambulacral furrow spines compressed, chisel-shaped.

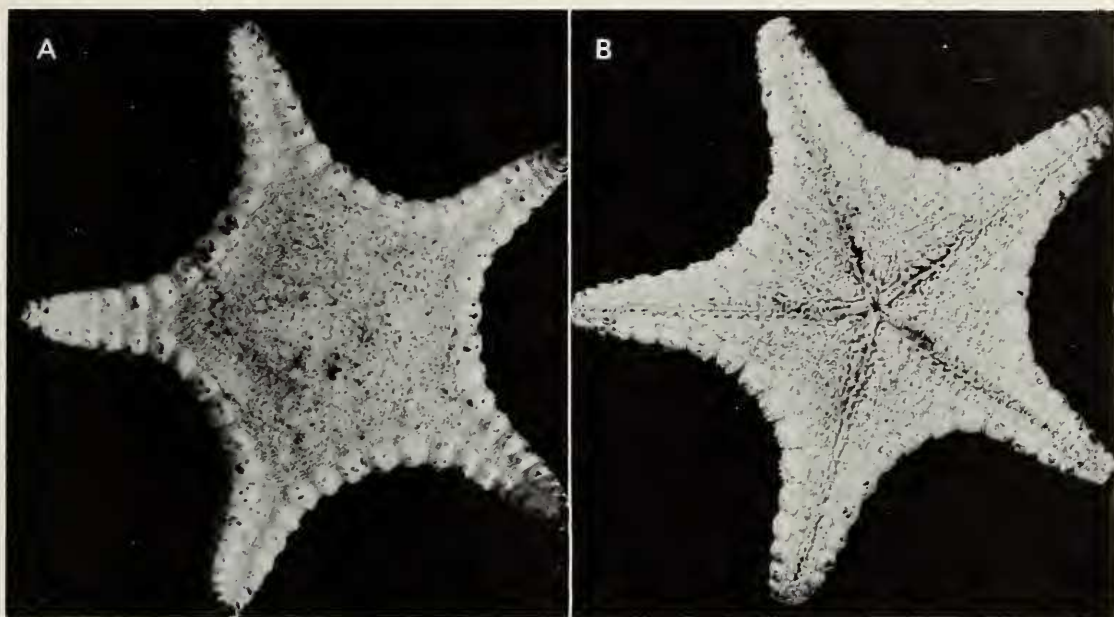


Fig. 1. *Floriaster maya*: A, Abactinal view; B, Actinal view.

Floriaster maya, new species

Type.—USNM E18324.

Type-locality.—Southern end of Yucatan Channel, 20°45'N, 86°27'W, 933–1,024 m, *Alaminos Sta.* 70A10–6, 6 July 1970.

Etymology.—Flos, floris (Latin)—flower (referring to the cauliflower-like granules); aster (Latin)—star, gender masculine; maya—a noun referring to the Mayan Indians of Yucatan.

Description.—Disc broad, thick; arms 5, moderately long, narrow; abactinal plates slightly tumid, irregular, very closeset, not at all tabulate; plates surrounded by row of rough, indented granules; some abactinals bare in center, most with 1–3 enlarged rounded granules and/or small or large pedicellariae (difficult to distinguish from granules); superomarginal plates on arms separated medially by single row of plates, bare or with single large granule; papulae single, scattered over entire disc; superomarginals decidedly tumid, bare, smooth, but with few, scattered, large, deciduous granules, each plate surrounded by single row of smaller granules (plates well-separated by these bands of granules); inferomarginal plates like superomarginals, with more granules and sometimes 1 or more tall, excavate pedicellariae; actinal areas large, plates large, few, irregularly polygonal, some with bare patch, most covered with large, irregular, indented granules or 1–2 huge, cauliflower-like granules or tall, clapper-shaped pedicellariae; ambulacral plates broader than long, with 7 compressed, chisel-shaped furrow spines, many (especially proximally) with flared, pitted tips, first spine short-

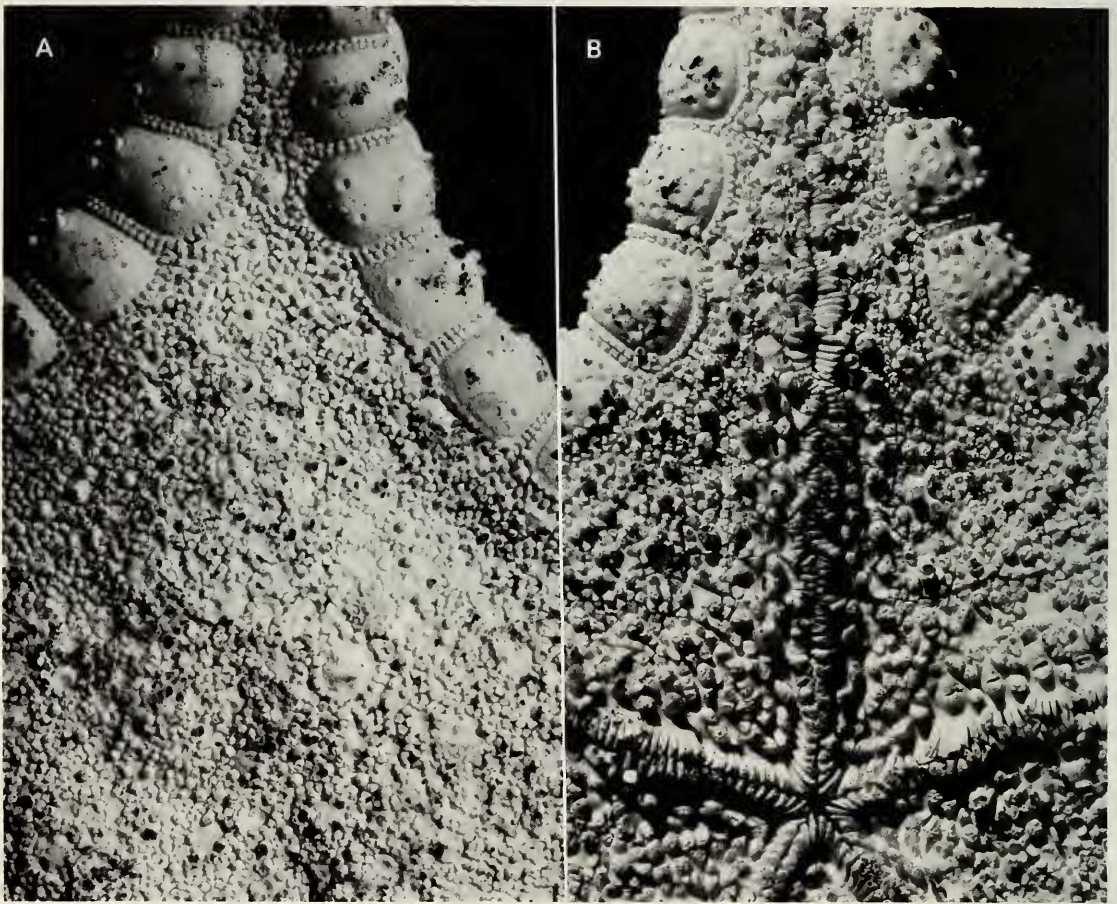


Fig. 2. *Floriaster maya*: A, Abactinal surface; B, Actinal surface.

er, broader, thicker; behind, plate bare except for 1 large, clapper-like pedicellaria and 0–2 large cauliflower-like granules; mouth plates large, triangular, with c. 10 compressed, chisel-like oral spines on each side, c. 10 rough, pitted granules, 1–2 large pedicellariae on surface; madreporite small, inconspicuous. Color: White (dried). $R = 40$ mm, $r = 20$ mm, $R = 2$; SM's = 20, $R/SM = 2$.

Discussion.—This new genus displays undoubted affinities with both *Circeaster* (Koehler, 1909) and *Astroceramus* (Fisher, 1906), but differs from both in the peculiar form of the granules and pedicellariae, in having a single (irregular) row of abactinal plates on the arms, and in the very tumid, strongly separated superomarginal plates. It differs also from *Circeaster* in lacking the enlarged abactinal plates on the arms, and in the size and shape of the granules and pedicellariae; and from *Astroceramus* in having none of the superomarginal plates in contact medially, and in lacking the bare abactinal plates covered with glassy bosses.

Acknowledgments

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